

[54] **GLUCOSE MEDICAL MONITORING SYSTEM**

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[57] **ABSTRACT**

Hand-held shirt-pocket portable medical diagnostic system for checking measurement of blood glucose, urea nitrogen, hemoglobin, blood components or other body qualities. The system includes the engagement of a disposable needle or lance probe package which carries a chemical reagent strip such as blood reacting chemistry. The system includes a pen structure having a visual readout, a microcomputer, and photosensing circuitry which measures the change of color of the blood reacting chemistry of the disposable probe package. The pen also includes a spring arrangement for actuating a needle or lance into the skin for transferring blood from a finger or other area to the chemical reagent strip. A disposable probe structure package includes configurations for transferring of the blood to the reagent strip or the reagent strip to the blood. The pen can also create a vacuum about a time period that the needle is penetrating the skin. The system includes a verification sequence of the electronics, the chemistry of an unused disposable probe package, the presence of blood sample and multiple readings to average results. The system can also be provided with provisions for storing a plurality of readings, communicating with a personal computer, and can act as an alarm and chime to indicate time periods for blood sensing.

7 Claims, 23 Drawing Figures

